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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/779,359	02/08/2001	Mike Conrad Duron	AUS920010037US1	5783

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EXAMINER	
ALEXANDER, JESSE NELSON	
ART UNIT	**PAPER NUMBER**
2666	

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/779,359	DURON, MIKE CONRAD	
	Examiner	Art Unit	
	Jesse N. Alexander	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 May 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because the title of the invention appears above the abstract paragraph and should be deleted. Correction is required. See MPEP § 608.01(b).

Drawings

2. The drawings are objected to because the word "VALVE" in the labels for elements 508 and 510 of fig. 5 should be replaced with the word "VALUE". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be

notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claim 3 is objected to because of the following informalities: Claim 3 should depend on claim 2 because of the recitation "wherein the period of time...". Appropriate correction is required.

4. Claim 21 is objected to because of the following informalities: Claim 21 should depend on claim 20 because of the recitation "wherein the period of time...". Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims **1, 4-8, 10, 12, 13, 16-19, 22-26, 28, 30, 31, 34, 35, 39, 40, 44, 45,** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (US 6,526,433 B1) in view of Cisneros (US 5,77,988).

Regarding claims 1, 4, 8-10, 12, 16, 17, 18, 19, 22, 26-28, 30, 35, and 40, Chang et al. teaches a method in a data processing system **(distributed computing environment in fig. 1 and fig. 2)** for setting a time out value, the method comprising:

routing data to a path; using the identified measuring latency **(response time to a remote procedure call includes network latency and is measured in fig. 5, step 72)** for the data sent on the identified path to form a measured latency; and setting the time out value using the measured latency **(response time is stored in log or file in fig. 5, step 74 and used by method in fig. 4, step 58 to set the timeout value)**, wherein the time out value is used to initiate a computer implemented process **(e.g. an application, see col. 4, lines 64-67 and fig. 3)**.

Chang et al teaches further the method wherein the identifying, routing measuring, and setting steps are performed in response to an event—that event being the DCE application client periodically initiating communication with the application server in **step 64 of Fig. 5.**

Chang et al teaches further wherein the data processing system of claim bus system is a single bus in **fig. 2, element 21.**

However, Chang et al. fails to teach identifying a path from a set of paths from the data processing system to a destination to form an identified path, wherein the identified path has a largest latency in the set of paths.

Cisneros, however, teaches the concept of determining or identifying the path with the maximum latency or delay in fig. 6A and constantly comparing the latency of different paths to measured latency **(col. 7, lines 49-51)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Chang et al. server/clients with the maximum latency path identification teachings of Cisneros. The motivation to combine is to set an optimal

timeout value based on the path between the client/server as well as the applications running on them, as Chang et al. states in col. 2, line 56-63.

Regarding claim 5, 6, 7, 23, 24, and 25, Chang et al. teaches data processing nodes that consist of clients and servers in fig. 1.

Chang et al. fails to explicitly teach nodes that are switches or routers.

Cisneros teaches the concept of network switches capable to route data in fig. 5A and 5B, elements S_c.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Chang et al. server/clients with the teachings of Cisneros. The motivation to combine is that it is well known in the art that routers and switches are data processing devices capable to route packets.

Regarding claims 16, 17, 18, Chang et al. teaches a network data processing system comprising: a network **(fig. 1)**; a destination node connected to the network **(fig. 1, element 10b, server)**; and a source node **(fig. 1, element 10a, client)** connected to a destination node **(fig. 1, element 10B)**. Chang et al. also teaches measuring latency of the data routed from the source node to the destination node to form a measured latency **(response time to remote procedure call includes network latency and is measured in fig. 5, step 72)**, and setting a time out value for a node using the measured latency **(response time is stored in log or file in fig. 5, step 74 and used by method in fig. 4, step 58 to set the timeout value)**.

Chang et al. fails to teach the network in which a plurality of paths are present from the source node to the destination node, wherein the source node routes data to the destination node through a selected path within the plurality of paths in which the selected path has a longest latency period.

Cisneros, however, teaches the concept of a plurality of paths from the source node to the destination node in **fig. 1**. Cisneros also teaches the concept of selection of the route to the destination node through the path with the longest latency period in the first step in **fig. 6A**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the latency or delay measurement and timeout teachings of the Chang et al. data processing system and method with the maximum latency path identification teachings of Cisneros. The motivation to combine is to set an optimal timeout value based on the path between the client/server as well as the applications running on them, as Chang et al. states in col. 2, line 56-63.

Regarding claims 13 and 31, Chang et al. teaches a method in a data processing system **(fig. 1)** for setting a time out value, the method comprising: measuring a time for the data to reach the destination to form a measured time **(response time to remote procedure call includes network latency and is measured in fig. 5, step 72)**; and setting a time out value using the measured time **(response time is stored in log or file in fig. 5, step 74 and used by method in fig. 4, step 58 to set the timeout value)**. Chang et al. also teaches a plurality of paths

connected to a plurality of client server pairs in **fig. 3**, and measuring the delay or latency in **(response time is stored in log or file in fig. 5, step 74 and used by method in fig. 4, step 58 to set the timeout value)** by sending messages along said paths.

However Chang et al. fails to teach sending data on a particular path within a plurality of paths to a destination, wherein the particular path has a longest latency of within the plurality of paths.

Cisneros teaches the concept of a system capable to send messages or transfer data across a plurality of paths—including the path with the greatest latency in **fig. 6B**. Referring to **fig. 6B**, the decision **step tn = tc** would be true for the path with the maximum delay.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the latency measurement and message sending teachings of the Chang et al. data processing system and method with the maximum latency path determination teachings of the Cisneros invention. The motivation to modify is to update and verify the accuracy of measurements of the longest latency path given changing network conditions.

Regarding claims 34, 39, 44, and 45, Chang et al. teaches a data processing system comprising: a bus system **(fig. 2, element 21)**; a communications unit **(fig. 2, element 40)** connected to the bus system; a memory connected to the bus system **(fig. 2, element 24)**, wherein the memory includes as set of instructions **(fig. 2, elements**

52, 48, 49); and a processing unit connected to the bus system **(fig. 2, element 22)**, wherein the processing unit executes the set of instructions to route data to the destination along a path using the communications unit; measure latency for the data sent on the identified path to form a measured latency **(response time to remote procedure call includes network latency and is measured in fig. 5, step 72)**; and set a time out value using the measured latency **(response time is stored in log or file in fig. 5, step 74 and used by method in fig. 4, step 58 to set the timeout value)**, wherein the time out value is used to initiate a computer implemented process **(e.g. an application, see col. 3, lines 56-58)**.

Chang et al. fails to teach wherein the processing unit executes the set of instructions to identify a path from a set of paths from the data processing system to a destination to form an identified path, wherein the identified path has a largest latency in the set of paths.

Cisneros, however, teaches the concept of a system capable of determining or identifying the path with the maximum latency or delay in fig. 6A among a plurality of paths.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the latency or delay measurement and timeout teachings of the Chang et al. data processing system and method with the maximum latency path identification teachings of Cisneros. The motivation to combine is to set an optimal timeout value based on the path between the client/server as well as the applications running on them, as Chang et al. states in col. 2, line 56-63.

7. Claims **36-38 and 41-43** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (US 6,526,433 B1) in view of Cisneros (US 5,77,988), in further view of "The RS/6000 Enterprise Server Model S80 Technology and Architecture Technical White Paper".

Regarding claims, Chang et al. discloses in **fig. 2, element 21** a data processing system comprising a single bus, (in **fig. 2, element 22)** a single processing unit, and a I/O controller **fig. 2, element 46** connected to the bus. Chang et al. also discloses that the configuration is not limited to that shown in **fig. 2 in col. 4, lines 54-59.**

Chang et al. as modified by Cisneros fails to explicitly disclose a data processing system comprising a bus system including a primary and secondary bus, wherein the I/O controller is a modem or Ethernet adapter.

However, "The RS/6000 Enterprise Server Model S80 Technology and Architecture Technical White Paper" discloses a system in the figure on page 1 with 10 SMP system data busses supporting a plurality of CPU cards.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Chang et al. data processing device with the teachings of "The RS/6000 Enterprise Server Model S80 Technology and Architecture Technical White Paper" such that the resultant system comprises a plurality of processors, a bus system comprising a primary and secondary bus, a modem and a Ethernet adapter. The motivation to combine and modify is to provide high

reliability/high availability communication processing for networks, and to support connectivity to the network via modems or Ethernet adapters.

8. Claims **2, 3, 11,14, 15, 20, 21, 29, 32, and 33**, are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (US 6,526,433 B1) in view of Cisneros (US 5,77,988), in further view of Suzuki et al. (US 2004/0037233 A1).

Regarding claims 2, 3, 14, 15, 20, 21, 32, and 33, Chang et al. teaches that any suitable method may be used for setting the time out value using the measured latency of each of a plurality of paths to account for changes in latency measurements along the same path from time-to-time col. 6, lines 56-60.

Neither Chang et al. or Cisneros specifically teach the method wherein the step of setting the time out value using the measured latency comprises: adding a period of time or percentage of the measured latency to set the time out value.

Suzuki et al. teaches adding a certain amount of time to the measured delay value to cover the estimated internal processing delay of the system in fig. 8, element s50.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the latency or delay calculation teachings of the Chang et al. data processing system and method modified with Cisneros, in view of Suzuki et al. such that the formula would include adding a constant or percentage to the measured latency value. The motivation to modify is to set an optimal timeout value slightly above the measured value to account for deviations that can occur between

measurements of the same path caused by processing load transients or variations due to real-time changes in network loading, internal processing delay, process synchronization between nodes, etc. and is well known in the art.

Regarding claims 11 and 29 Chang et al. teaches that non-optimal timeout values result in the client waiting an excessive time period before recognizing a failure to respond on the part of the server in **col. 1, lines 58-60.**

However Chang et al. as modified by Cisneros fails to explicitly teach the method wherein the computer implemented application is an error detection process.

Suzuki et al. teaches the method wherein the computer implemented application is an error detection process that involves the resending of the packet as a result of a timeout **in fig. 9 step s67 and [0059] –[0060]**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the latency or delay measurement and timeout teachings of the Chang et al. data processing system and method with the maximum latency path identification teachings of Cisneros, and the teachings error detection process of Suzuki et al. The motivation to combine is to set an optimal timeout value based on the path between the client/server as well as the applications running on them, as Chang et al. states in **col. 2, line 56-63**, and to thereby applications from waiting an excess amount of time while waiting for a response as stated in Suzuki et al. **[0003], lines 15-21**.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited the show the state of the art in general of a timeout value setting for distributed computing environment (DCE) applications

- US-6,724,732 B1 04-2004 Abrams et al.
- US-5,878,032 A 03-1999 Mirek et al.
- US-6,724,732 B1 04-2004 Abrams et al.
- US-6,115,357 09-2000 Packer et al.
- US-5,095,444 A 03-1992 Motles, Luis
- US-6,226,266 B1 05-2001 Garland et al.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jesse N. Alexander whose telephone number is (571) 272-3167. The examiner can normally be reached on 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jna3

RICKY NGO
PRIMARY EXAMINER
10/31/04